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Taxonomic changes in palaeotropical Xyleborini (Coleoptera, Curculionidae, Scolytinae)

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Abstract

Following the recent reclassification of the Palaeotropic xyleborine genera (Hulcr & Cognato 2010), additional species are transferred to correct genera or synonymized based on analysis of their morphological characters. The following species are given new combinations: *Debus amphicranoides* (Hagedorn), **comb. n.,** *Debus birmanus* (Eggers, 1930), **comb. n.,** *Debus dolosus* (Blandford, 1896), **comb. n.,** *Debus eximius* (Schedl, 1970), **comb. n.,** *Debus interponens* (Schedl, 1954), **comb. n.,** *Debus robustipennis* (Schedl, 1954), **comb. n.,** *Debus spinatus* (Eggers, 1923), **comb. n.,** *Microperus alpha* (Beeson, 1929), **comb. n.,** *Microperus corporaali* (Eggers), **comb. n.,** *Microperus eucalyptica* (Schedl, 1938), **comb. n.,** *Microperus nugax* (Schedl, 1939), **comb. n.,** *Pseudowebbia percorthylus* (Schedl, 1935), **comb. n.,** *Truncaudum circumcinctus* (Schedl, 1941), **comb. n.**

The following species are synonymized: *Arixyleborus hirtipennis* (Eggers), **syn. n.,** with *Arixyleborus puberulus* (Blandford); *Coptoborus palmeri* (Hopkins), **syn. n.**, with *Debus emarginatus* (Eichhoff); *Coptoborus terminaliae* (Hopkins), **syn. n.**, with *Debus emarginatus* (Eichhoff); *Cyclorhipidion polyodon* (Eggers), **syn. n.**, with *Truncaudum agnatum* (Eggers); *Euwallacea artelaevis* (Schedl), **syn. n.**, with *Planiculus bicolor* (Blandford); *Xyleborinus perminutissimus* (Schedl), **syn. n.**, with *Xyleborinus perpusillus* (Eggers); *Xyleborus exesus* Blandford, **syn. n.**, with *Debus emarginatus* (Eichhoff); *Xyleborus fulvulus* (Schedl), **syn. n.**, with *Microperus corporaali* (Eggers); *Xyleborus marginicollis* (Schedl), **syn. n.**, with *Diuncus justus* (Schedl); *Xyleborus shoreae* Stebbing, **syn. n.**, with *Debus fallax* (Eichhoff).

The following species are given new status: *Streptocranus superbus* (Schedl, 1951), **restored name**; *Webbia divisus* Browne, 1972, **restored name**; *Webbia penicillatus* (Hagedorn, 1910), **restored name**. Genus *Taphrodasus* Wood (1980) is declared not valid.

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Keywords
ambrosia beetles, Debus, *Microperus*, reclassification

Introduction

Xyleborini are one the most species-rich groups of scolytine beetles, and one which produced many invasive pests. In spite of the economic concern, xyleborine beetles have received comparatively little attention by taxonomists. S. L. Wood (1989) made the first major attempt to organize the many hundreds of described species into a generic classification. This classification was subsequently adopted in the most comprehensive treatise on scolytine taxonomy, the Catalog of Scolytidae and Platypodidae (Wood and Bright 1992, Bright and Skidmore 1996, 2002, also on-line at: http://www.scolytid.msu.edu). This concept was later refined using morphological cladistics (Hulcr et al. 2007a, Hulcr and Cognato, 2009), and currently summarized by Alonzo-Zarazaga and Lyal (2009). Hulcr and Cognato (in press) provided further rearrangements of Palaearctic and Palaeotropical Xyleborini classification using a combination of morphological and molecular approaches. This work augments the latest classification with a series of transfers and synonyms. Majority of the species treated here occur in SE Asia or Melanesia.

List of abbreviations

BMNH	Natural History Museum, London
FRI	Forestry Research Institute, Dehra Dun, India
MCG	Museo Civico Genova, Genova
MNB	Museum fur Naturkunde der Humboldt University, Berlin, Germany
MSUC	Michigan State University Arthropod Collection, East Lansing, MI, USA
NHMW	Natürhistorisches Museum, Wien, Austria
RAB	Roger A. Beaver's private collection, Chiang Mai, Thailand
SMTD	Staatliches Museum fur Tierkunde, Dresden, Germany
UCD	Bohart Museum, University of California-Davis, CA, USA
USNM	United States National Museum, Smithsonian Institution, Washington, D.C., USA.

Taxonomic treatment

Arixyleborus puberulus (Blandford)

Xyleborus puberulus (Blandford, 1896)
Xyleborus hirtipennis Eggers, 1940, **syn. n.**

Arixyleborus hirtipennis (Eggers): Browne, 1955, **syn. n.**

Specimens examined. Indonesia, Java (*X. hirtipennis*, lectotype, USNM); Sarawak, Malaysia (*X. puberulus*, holotype, BMNH).

Comments. Lectotype of *Arixyleborus hirtipennis* bears all essential features of *A. puberulus*, only the declivital rugosities more organized into rows, shining area of elytra smaller, less clearly distinguished from rugose area. These are exceptionally plastic in *A. puberulus*, *A. hirtipennis* represents small deviation in the large range of variation of declivital surface in *A. puberulus*.

Diuncus justus (Schedl)

Xyleborus justus Schedl, 1931
Diucus justus (Schedl): Hulcr & Cognato, 2009
Xyleborus marginicollis (Schedl, 1936b), **syn. n.**

Specimens examined. Indonesia, Java, Buitenzorg (*D. justus*, holotype, NHMW); Philippines, Luzon, (*X. marginicollis*, holotype, NHMW).

Length. 1.5 mm.

Comments. Type specimen of *X. marginicollis* Schedl represents one end of a continuum of variation in *D.justus*: short (1.5 mm) but robust (most representatives of *D. justus* slightly longer and more slender). Diagnostic characters identical: surface of declivity devoid of vestiture, no elytral denticles, smooth impression across interstriae 2 and 3 (very shallow).

Debus amphicranoides (Hagedorn), comb. n.

Xyleborus amphicranoides Hagedorn, 1908

Specimens examined. Malaysia, Sabah, Danum Valley (2, R.A. Beaver det., MSUC); Sumatra (USNM).

Comments. Prolonged large representative of *Debus*. Elytral declivity deeply excavated, edge of declivity with two pairs of long teeth, but only few tubercles. Declivital surface smooth.

Debus amphicranoides (Hagedorn) possibly senior synonym of the following (NHMW): *Debus birmanus* (Eggers), *Debus cyclopus* (Schedl), *Debus interponens* (Schedl), *Debus robustipennins* (Schedl). *D. birmanus* identical except slightly larger, with slightly longer declivital posterolateral processes, much smaller upper tooth on declivity. *D. interponens* similar except lacks constricted declivity and has shorter posterolateral declivital processes. Schedl (1954) considered *D.* (as *Xyleborus*) *interponens* possible altitudinal variation of *X. robustipennins*; the two essentially identical, origi-

nated from different elevations. *Debus cyclopus* similar except narrower elytral apical emargination. *Debus robustipennis* larger. Schedl (1954) mentioned that it only differed from *D. amphicranoides* in minor differences in declivital teeth shape.

Debus birmanus (Eggers), comb. n.

Xyleborus birmanus Eggers, 1930

Specimens examined. Malaysia, Burma (2 indiv., BMNH).

Comments. Very similar to *D. amphicranoides*, possibly a synonym. Holotype at FRI not available.

Debus dolosus (Blandford), comb. n.

Xyleborus dolosus Blandford, 1896

Specimens examined. Malaysia, Sarawak (holotype, BMNH); Malaysia, Sabah, Danum Valley (9 indiv., Hulcr det., MSUC.).

Diagnosis. Elytral declivity slightly with much higher number of declivital tubercles than other *Debus*. Declivity flat, not excavated, not emarginate at apex. Depth of emargination varies. Similar to *Debus pumilus*, but uniformly brown, with more and larger tubercles on the declivity. Significant intraspecific size variation.

Comments. Elytral declivity superficially different from other *Debus* spp, but its structure homologous. Few small or large tubercles in the interstriae 1 (usually 3 pairs), displaced by broadened interstriae 1 and positioned on first striae or on interstriae 2. Strial punctures greatly reduced on declivity, difficult to follow as interstria 1 broad, displacing other striae. No tubercles originating on second striae. Smaller tubercles on striae 3 and beyond, creating tuberculated area surrounding declivity. Other characters shared with *Debus* spp.: extended pronotal disc, triangular protibiae with large and long but sparse denticles (<7), inflated prosternal posterocoxal process, antennal club shape.

Xyleborus persimilis (Eggers) and *D. dolosus* (Blandford) probably synonyms. *X. persimilis* (lectotype, USNM) with slightly broader, more excavated declivity. Browne (1961) suggested that *X. subdolosus* is only a local variety of *D. dolosus.*

Debus eximius (Schedl), comb. n.

Xyleborus eximius Schedl, 1970

Specimens examined. Indonesia, Kalimantan (2, holotype & allotype, NSMT); Indonesia, Kalimantan (2 paratypes, NHMW).

Comments. Elytral apex not emarginate, but all other diagnostic characters of *Debus* present: elongated pronotal disc, broad antennal club type 2, triangular protibiae, flat elytral declivity with tubercles on elevated lateral sulcus (appears as if formed by interstriae 2 through 4).

Debus fallax (Eichhoff)

Xyleborus fallax Eichhoff, 1878
Debus fallax (Eichhoff): Hulcr & Cognato, 2010
Xyleborus shoreae Stebbing, 1909, **syn. n.**
(complete taxonomic history in Wood and Bright, 1992)

Specimens examined. *X. shoreae*: India, Kumaon, (2), Beeson det., BMNH); Malaysia, Kedah, (two labels: *X. shoreae*, Browne det., *X. fallax*, Schedl det., BMNH); Thailand, Pong Yaeng N. P., (Beaver det.); Borneo (Schedl det., BMNH); *D. fallax*: Malaysia, Sabah, Danum Valley (Hulcr det.); Malaysia, Sabah, Danum Valley (51, Hulcr det.); New Guinea, Morobe Province, Bulolo (Jordal det.); New Guinea (BBM, 5 indiv.); Sulawesi (Browne det., BMNH); Thailand, Pong Yaeng N. P. (2, Hulcr det.); PNG, Madang Prov. (36), Oro Prov. (66), West Sepik (123) (Hulcr coll, det.); Philippines, Luzon, Mt. Makiling (*X. amphicranulus* Egg. holotype, *X. fallax* syn., SMTD).

Comments. Holotype of *X. shoreae* in FRI, inaccessible, non-type specimens identified by several authorities available. Location of *X. fallax* holotype unclear. Wood and Bright (1992) indicated IRSNB as holotype depository, however museum personell reports that holotype has never been deposited there. *X. shoreae* is a variant of *D. fallax* (Eichhoff), declivital emargination shallower than in most *D. fallax*. All other characters identical to *D. fallax*: color uniformly brown to bicolored (light brown to orange pronotum), elytral denticles all small except the denticle in the middle of declivital face, which is slightly longer than others; declivity surface shining, most specimens with remnants of strial punctures, size 2.6 - 3.0 mm. Declivity emargination depth intermediate between *D. fallax* and *D. emarginatus*, most other characters (size, coloration, flat posterolateral processes) shared with *D. fallax*. Maiti and Saha (2004) had access to holotype, redescription and illustration fits *D. fallax*. Stebbing not consistent in distinguishing *X. shoreae* from *X. fallax*, assigned similar specimens to either species (Maiti and Saha 2004).

Biology and distribution: Reported from India and Thailand, and by Browne (1983) as imported from PNG to Japan. Despite the name "*shoreae*", the species is a broad generalist (Wood and Bright, 1992).

Debus interponens (Schedl), comb. n.

Xyleborus interponens Schedl, 1954

Specimens examined. Malaysia, Sarawak, Mt. Penrissen, 4500 ft. (lectotype, NHMW).

Comments. All diagnostic features of genus *Debus* present, including antennal club form, prolonged pronotum, emarginate declivity. Similar to *D. amphicranoides* (Hagedorn), but with less constricted declivity and longer posterolateral declivital processes. Schedl (1954) considered *D. interponens* altitudinal variant of *D. robustipennins*, the two are allegedly identical, only differing by their origins from different elevations.

Debus robustipennis (Schedl), comb. n.

Xyleborus robustipennis Schedl, 1954

Specimens examined. Indonesia, Borneo (lectotype, NHMW).

Comments. All diagnostic features of *Debus* present, including antennal club form, prolonged pronotum, emarginate declivity.

Lectotype of *X. robustipennis* Schedl very similar to non-type specimens of *Debus amphicranoides* (Hagedorn) in USNM, only slightly larger. Schedl (1954) indicated that *X. robustipennis* differs from *X. amphicranoides* very little, merely by shallower and wider declivital emargination, having the lateral declivital costa between teeth 1 and 2 more elevated, and lateral declivital process shorter. Type of *D. amphicranoides* not available, thus synonymy could not be confirmed.

Debus spinatus (Eggers), comb. n.

Xyleborus spinatus Eggers, 1923

Specimens examined. Malaysia (BMNH); Malaysia, Sabah, Danum Valley (3, Hulcr det.).

Diagnosis. An "elegant" form of *D. fallax*. Longer, smooth declivity, shallowly emarginate, no tubercles or granules on declivital sides except two pairs of slender teeth, one long, one short. Declivity shagreen when dry.

Debus emarginatus (Eichhoff)

Xyleborus emarginatus Eichhoff, 1878
Debus emarginatus (Eichhoff): Hulcr & Cognato, 2010
Xyleborus terminaliea Hopkins, 1915, **syn. n.**

Coptoborus terminaliae (Hopkins) Wood and Bright, 1992, **syn. n.**
Xyleborus exesus Blandford, 1894, **syn. n.**
Xyleborus palmeri Hopkins, 1915, **syn. n.**
Coptoborus palmeri (Hopkins): Wood & Bright, 1992, **syn. n.**
(complete taxonomic history in Wood and Bright, 1992)

Specimens examined. *X. terminaliae*: Philippines, Pagbilao (holotype, USNM). *X. exesus*: Japan, (holotype, BMNH). *D. emarginatus*: Indonesia, Sumatra, Bandar Baroe (homotype, compared to type by Eggers, NHMW); Indonesia, Java, Bandjar (homotype, compared to type by Eggers, NHMW, 2 indiv.); Philippines, Laguna, Pangil (homotype, NHMW); Malaysia, Sabah, Danum Valley (17 indiv., Hulcr det., MSUC); New Guinea (BBM, 20 indiv.); New Guinea, Ambunti (4, BBM); New Guinea (FICB); New Guinea, Gulf Province, Ivimka (UCD); Thailand, Pong Yaeng N. P. (Hulcr det., MSUC); PNG, Madang Prov. (79, Hulcr coll.).

Comments. Holotypes of *X. exesus* Blandford, *X. palmeri* Hopkins, and *X. terminaliae* Hopkins share all diagnostic characters with homotype and large series of nontypes of *Debus emarginatus* (Eichhoff). *X. exesus*: declivity with slightly less steep slope, less pronounced lateral tubercles (granules), dominant tubercle in middle of lateral sulcus slightly longer. Schedl (1973e) suggested synonymy of non-New Guinean *X. emarginatus* Schedl with *X. exesus* Blandford, based on shared shallow declivital emargination. Holotype of *X. exesus* damaged, missing elytron, fits range of *D. emarginatus* variation. *X. palmeri* Hopkins is larger variant of typical *D. emarginatus*.

Microperus alpha (Beeson), comb. n.

Xyleborus alpha Beeson, 1929
Coptodryas alpha (Beeson) Wood & Bright, 1992

Specimens examined. India, Sunderbans Div. (holotype, BMNH).

Comments. All diagnostic features of *Microperus* present: small size, elytral punctures aligned in striae, and prolonged body shape (Hulcr and Cognato in press). Similar to *Microperus pometianus*, but slightly longer, with distinctly elevated and long declivital costa.

Microperus corporaali (Eggers), comb. n.

Xyleborus corporaali (Eggers, 1923)
Coptodryas corporaali (Eggers): Wood & Bright, 1992
Xyleborus fulvulus (Schedl, 1942b), **syn. n.**
Xyleborus fulvus (Schedl, 1939): *X. fulvulus* (Schedl, 1942), preoccupied (*Xyleborus fulvus* Murayama 1936), **syn. n.**

Specimens examined. *M. corporaali*: Indonesia, Kotangan an der Ostkusgte (lectotype, USNM); *X. fulvulus*: Indonesia, Sumatra (paratype, USNM).

Comments. *X. fulvulus* identical to *Microperus corporaali* (identical antennae, body shape, declivital surface and shape, posterolateral declivital costa, declivital vestiture as one row of erect setae per intrestria, backward-bent setae in strial punctures). Paratype not mentioned by Anderson and Anderson (1971).

Microperus eucalyptica (Schedl), comb. n.

Xyleborus eucalyptica Schedl, 1938
Coptodryas eucalyptica (Schedl): Wood & Bright, 1992

Specimens examined. Australia, Queensland, Geagana (lectotype, NHMW).

Comments. All diagnostic features of *Microperus* present (elytral mycangia, absence of scutellum, small size, prolonged body shape, abundant vestiture). Similar to *M. intermedius*, but substantially longer, elytra often bicolored, usually without convexity on elytral disc.

Microperus nugax (Schedl), comb. n.

Xyleborus nugax Schedl, 1939
Coptodryas nugax (Schedl): Wood & Bright, 1992

Specimens examined. Malaysia, Selangor (lectotype, BMNH); Malaysia, Selangor (Schedl det., BMNH); Malaysia, Sabah, Danum Valley, (13, Hulcr det., MSUC).

Diagnosis. Very similar to *Microperus diversicolor* (e.g., antennal club type 3), except pronotum bright yellow with brown patch, elytra black, declivity commencing closer to elytral base, declivital interstriae covered with many small sharp hooks (similar as in *M. parva*, but larger). Characteristic elytral disc: anterior portion inflated, convex, boundary between elytral disc and declivity slightly concave, impressed.

Comments. Schedl (1979) designated lectotype in NHMW, another unspecified "type" resides in BMNH. Possibly synonymous with *Coptodryas undulata* (Sampson) (as *X. leprosulus* Schedl, syn. Wood, 1989) (Schedl, 1939).

Biology. Creates irregularly branching galleries with transverse brood chambers (Beaver & Browne 1978).

Planiculus bicolor (Blandford)

Xyleborus bicolor Blandford, 1894
Euwallacea bicolor (Blandford): Wood & Bright, 1992

Planiculus bicolor (Blandford): Hulcr & Cognato, 2010
Xyleborus artelaevis (Schedl, 1942a), syn. n.
Euwallacea artelaevis (Schedl): Beaver, 1998, syn. n.
Xyleborus rameus Schedl, 1940
Xyleborus bicolor (Schedl): Kalshoven, 1959

Specimens examined. *X. artelaevis*: Malaysia, Perak, (holotype, NHMW); New Guinea, Gulf Province, Ivimka, (R.A. Beaver det., UCD); Indonesia, Sulawesi (R. A. Beaver det., BMNH). *P. bicolor*: Nagasaki, Japan (syntype, BMNH); Fiji, Namosi (*X. rameus* (syn. *P. bicolor*) Schedl det., BMNH).

Comments. Holotype of *X. artelaevis* virtually identical to *Planiculus bicolor* (Blandford), except first segment of antennal club more convex. All other characters identical, including uniform granules in declivital interstriae 1, 2, and 3 (same size granules in interstriae 1–3 characteristic for *P. bicolor*). *X. artelaevis* holotype deteriorated, missing or damaged body parts including antenne.

Pseudowebbia percorthylus (Schedl), comb. n.

Xyleborus percorthylus Schedl, 1935
Taphrodasus percorthylus (Schedl): Wood, 1980

Specimens examined. Malaysia, Peninsula (holotype, NHMW).

Comments. Diagnostic characters of *Pseudowebbia*: regular type of pronotum (not extremely prolonged and flat as in *Webbia*), circular antennal club (not broadened), triangular to broadly rounded protibia (not thin and sickle-like as in *Webbia*). Elytral declivity deeply excavated, surrounded by highly elevated circumdeclivital costa with no teeth.

Type species of *Taphrodasus* Wood, 1980. Morphological limits of *Taphrodasus* never specified. Characters listed by Wood (1980) are either autapomorphic to *T. percorthylus*, or present in other genera, mostly *Webbia*. *Taphrodasus* not a valid genus, see below.

Streptocranus superbus (Schedl), stat. n.: restored name

Xyleborus superbus Schedl, 1951
Coptoborus superbus (Schedl): Wood & Bright, 1992
Xyleborus superbulus Schedl, 1958a, **unnecessary replacement name**
Coptoborus superbulus (Schedl, 1958a): Wood & Bright, 1992, **unnecessary replacement name**

Specimens examined. Indonesia, Java, Buitenzorg (holotype, NHMW).

Comments. *Xyleborus superbus* Schedl (1951) preoccupied by *Xyleborus superbus* Schedl (1942c). Renamed *X. superbulus* (Schedl, 1958a). *X. superbus* Schedl (1942c) later placed in *Coptoborus* (Wood and Bright 1992). Replacement name unnecessary, original name *S. superbus* (Schedl, 1951) restored.

Genus *Taphrodasus* Wood, stat. n.: invalid genus

Taphrodasus Wood (1980), monotypic, type species *Taphrodasus percorthylus* (Schedl, 1935): Wood, 1980. Later included in *Taphrodasus*: *Webbia divisus* Browne (1972), *Xyleborus penicillatus* Hagedorn (1910), *Xyleborus cuspidus* Schedl (1975). *T. percorthylus* transferred to *Pseudowebbia* (Hulcr and Cognato, this volume); *T. divisus* and *T. penicillatus* restored in *Webbia* (Hulcr and Cognato, this volume), *T. cuspidus* not related to any of the other three species (Hulcr and Cognato, *in prep.*).

Truncaudum agnatum (Eggers)

Xyleborus agnatus Eggers, 1923
Cyclorhipidion agnatum (Eggers): Wood & Bright, 1992
Truncaudum agnatum (Eggers): Hulcr & Cognato, 2010
Xyleborus polyodon (Eggers, 1923), **syn. n.**
Cyclorhipidion polyodon (Eggers, 1923): Wood & Bright, 1992, **syn. n.**
(complete taxonomic history in Wood and Bright, 1992)

Specimens examined. *T. agnatum*: New Guinea, Hatam (cotype, MCG). *X. polyodon*: Philippines, Luzon, Mt. Makiling; (unspecified "type", SMTD).

Comments. Type of *X. polyodon* similar to *T. agnatum*, except tubercles on and around declivity larger, pointed. Tubercles in homologous position. Eggers's unspecified "type" in SMTD from the same collection series as lectotype at USNM (Anderson & Andreson, 1971).

Truncaudum circumcinctus (Schedl), comb. n.

Premnobius circumcinctus Schedl, 1941
Premnobius circumcinctus (Schedl): Wood & Bright, 1992
Xyleborus circumcinctus (Schedl): Schedl, 1962b

Specimens examined. Uganda (*P. circumcinctus*, holotype, NHMW).

Comments. The only known African *Truncaudum*. *Truncaudum* synapomorphies: impressed submentum, antennal club type 1, curved outer edge of protibiae, complete denticulated circumdeclivital costa. Very similar to *Truncaudum impexus* [(Schedl):

Hulcr and Cognato (in press)], except declivity slightly convex (mostly flat in *Truncaudum* spp.), antenna type 1, several adjacent denticles on each stria on the upper edge of circumdeclivital costa (mostly a single flat tubercle in *Truncaudum* spp.). Otherwise remarkably similar to Asian relatives. Length: 2.8 mm.

Described as *Premnobius* by Schedl (1941), later treated as *Xyleborus* (Schedl, 1962b), but combination never offically published.

Webbia divisus Browne, stat. n.: restored name

Webbia divisus Browne (1972)
Taphrodasus divisus (Browne): Wood & Bright, 1992

Specimens examined. Malaysia, Perak (holotype, BMNH).

Comments. Transferred to *Taphrodasus* (Wood and Bright, 1992) without discussion of characters. *Webbia* synapomorphies: dorsal aspect of pronotum long and quadrangular, pronotal disc long and flat, frontal slope of pronotum short, scutellum suppressed, costate and setose elytral bases. Differs from most *Webbia* spp. by densely pubescent and excavated declivity and elongated body shape. Length: 2.4 mm. Characters shared with *Pseudowebbia percorthylus* [(Schedl, 1935): Hulcr and Cognato, this volume] (type species of *Taphrodasus*) limited to excavated declivity with dense setae, genus-level characters different.

Webbia penicillatus (Hagedorn), stat. n.: restored name

Xyleborus penicillatus Hagedorn 1910
Prowebbia penicillatus (Hagedorn): Browne 1963
Webbia penicillatus (Hagedorn): Bright 2000
Taphrodasus penicillatus (Hagedorn): Wood & Bright, 1992

Specimens examined. Malaysia, N.S. Triang (homotype, NHMW); Malaysia, Perak (BMNH); Malaysia, Borneo (BMNH).

Comments. Type in Hamburg museum lost (Wood and Bright 1992). Most features characteristic of *Webbia* (elongated pronotum, suppressed scutellum), unrelated to type species of *Taphrodasus*: *Pseudowebbia percorthylus* ((Schedl, 1935): Hulcr & Cognato, this volume). Similar to *W. divisus*, except declivity with long, dense, erect setae, not scales.

Xyleborinus perpusillus (Eggers)

Xyleborus perpusillus Eggers, 1927

Xyleborinus perpusillus (Eggers): Wood & Bright, 1992
Xyleborinus perminutissimus (Schedl, 1934) **syn. n.**

Specimens examined. *X. perminutissimus*: Indonesia, Java, Mt. Gede (lectotype, NHMW). *X. perpusillus*: Indonesia, Sumatra (holotype, USNM); Malaysia, Sarawak, Gunung Buda (R.A. Beaver det., MSUC); Malaysia, Sabah, Danum Vallery (29 indiv., Hulcr coll.); New Guinea, Oro Province, Kanga (5 indiv, Hulcr coll.).

Comments. Lectotype of *Xyleborinus perminutissimus* (Schedl, 1934d) virtually identical to holotype of *Xyleborinus perpusillus* (Eggers). Slightly smaller tubercles in some declivital interstriae, but pattern identical: tubercles missing from interstriae 2.

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